

REMARKS

Claims 1-22 were examined in the above-identified application. Claims 1-10 and 15-21 have been amended. Claim 11 has been canceled. Claims 23-29 are added. Support for these amendments is identified in the following remarks. No new matter has been added by these amendments.

Claim Rejections under 35 U.S.C. §112

Claims 1-9 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. To clarify the subject matter of claims 1-9, Applicants have amended the preambles to recite an "assembly". Applicants believe that such amendments clarify the subject matter of the claims. The claim amendments, however, should not narrow or otherwise affect the scope of claims 1-9.

The Examiner also alleged that claims 15-21 were unclear as to whether or not the claims were claiming an EMI/RFI shield or a method. Applicants have amended the preamble of claims 15-21 to clarify that the claims are directed toward a method.

Applicants believe that all pending claims are clear.

Claim Rejections under 35 U.S.C. §102

Claims 1-5, 7 and 8 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Forte et al. Such rejections are traversed for at the following two reasons.

First, the Examiner has not shown where Forte et al. shows every element of independent claim 1. It is well settled that in order to anticipate a claim under 35 U.S.C. § 102, every element must be shown or described in the cited reference. Amended independent claim 1 recites an assembly comprising an EMI/RFI shield integrally formed in a thermoformable sheet, wherein portions of the thermoformable sheet are removed around a periphery of the EMI/RFI shield such that the portions of the thermoformable sheet that are not removed integrally connect

the EMI/RFI shield to a remainder of the thermoformable sheet. Such an assembly is not described or suggested by Forte et al.

An example of subject matter that is encompassed by independent claim 1 is shown in FIGS. 5, 5A, and 5B and described at paragraph nos. 60-66 of the present application. In such embodiments, the EMI/RFI shield is integrally formed in a thermoformable sheet. The portions of the thermoformable sheet that are not removed are typically in the form of "tabs" that maintain the EMI/RFI shield with the remainder of the thermoformable sheet. Advantageously, the entire sheet (with the integrally attached EMI/RFI shield) may then be transported to a final assembly site, where the EMI/RFI shield is removed from the sheet just prior to mounting to a printed circuit board.

In contrast to the claimed assembly, FIGS. 2 and 3 of Forte et al. show a shield wrap 400 that comprises one or more insulator sections 402 and shield sections 404 (*see* col. 4, lines 31-33 and col. 4, lines 52+). However, there is simply nothing in Forte et al. that describes or suggests integrally connecting the EMI shield with portions of the thermoformable sheet, as is required by independent claim 1. Consequently, independent claim 1 is allowable over Forte et al.

Second, the Examiner stated in the Office Action as follows:

Additionally, a "wherein" clause that merely states the results of the limitations in the claim adds nothing to the patentability or substance of the claim. In this instance regarding claim 1, since the "wherein" clause was not used to related (sic) back and clarify the limitations of a previous claim from which it depends[,] it does not limit the claim.

Applicants disagree with the Examiner's assertions. The wherein clause of independent claim 1 does add to the substance of the claim and does much more than state the result of the limitations in the claim. Specifically, the wherein clause of claim 1 states "wherein portions of the thermoformable sheet are removed around the periphery of the EMI/RFI shield, such that the portions of the thermoformable sheet that are not removed integrally connect the EMI/RFI shield to the remainder of the thermoformable sheet. The wherein clause defines a

structural portion of the assembly that connects the EMI/RFI shield and the remainder of the sheet, and further describes the functionality of the "portions of the thermoformable sheet that are not removed". Per MPEP §2173.05(g), "functional limitation must be evaluated and considered, just like any other limitation of the claim...." Consequently, the wherein clause of claim 1 should be examined just like the other limitations of claim 1.

Dependent claims 2-5, 7, and 8 are allowable at least for depending from an allowable independent claim 1. In addition to depending from an allowable independent claim, dependent claims 2-5, 7, and 8 further recite novel aspects not described or suggested by the cited art. For example, dependent claim 3 recites that the EMI/RFI shield is multi-compartmentalized. In rejecting claim 3, the Examiner referenced col. 4, lines 52-63 of Forte et al. Applicants have reviewed the referenced text and see only a description of the insulator section 402. There is no description or suggestion of a multi-compartmentalized EMI/RFI shield. Since such features are not described or suggested in Forte et al., dependent claim 3 should be allowable. If the Examiner is to maintain this rejection, Applicants respectfully request that the Examiner specifically reference where Forte et al. describes multiple-compartments.

Furthermore, dependent claim 7 recites that the thermoformable sheet comprises a recycled, conductively coated polymer EMI/RFI shield that has been mechanically disintegrated and then recombined back into the formable polymer sheet. Even if the alleged method limitations of claim 7 are disregarded, the resultant structure and composition of claim 7 distinguishes over Forte et al. In dependent claim 7, the thermoformable sheet (and EMI/RFI shield) would inherently be at least partially conductive and would improve EMI/RFI shielding. Such an assembly is not described or suggested by Forte et al. In fact, Forte et al. specifically states at col. 4, line 54-56 that "insulator sections 402 comprise a material, or combination of materials that are substantially electrically non-conductive. As shown in FIG. 1 of Forte et al, because insulator sections 402 appears to lie directly over the printed circuit board, if the insulator section 402 were in fact comprised of a recycled, conductively coated polymer, such a

wrappable shield not insulate, but would in fact be conductive - which would make the insulator section 402 unsatisfactory for its intended purpose. *See* MPEP §2143.01.

Claims 10-14 and 22 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Long. Such rejections are traversed in part and overcome in part as follows.

To expedite prosecution of the present application and to more clearly claim the novel aspects of the present invention, Applicants have amended independent claim 10. Applicants herein reserve the right to pursue the subject matter of original claim 10 in a related application.

Amended independent claim 10 provides a reel of material for in-line processing equipment. The reel comprises a sheet of material and a spool that receives the sheet of substantially planar material. A plurality of non-planar EMI/RFI shields are integrally formed with the sheet of material and removably attached to the sheet of material that is rolled on the spool. The cited reference fails to describe or suggest such a reel.

In contrast, Long merely shows a planar emission blocking, diverting, and deflecting apparatus in the form of an adhesive tape roll (Figs. 1 and 2, Abstract and col. 2, lines 15-18). Fig. 3 illustrates that a cutting means 5 may be used to cut planar shaped elements from the apparatus 10. Long fails to describe or suggest non-planar EMI/RFI shields that are integrally formed with the sheet of material and removably attached to the sheet of material. Consequently, independent claim 10 is allowable over the cited references.

For at least the same reasons, dependent claims 12-14 should also be allowable. Additionally, the dependent claims further provide novel aspects that are not described or suggested by the cited references. For example, dependent claim 12 recites that the EMI/RFI shields are attached to the sheet of material with tabs of material. In rejecting dependent claim 12, the Examiner references Figs 1, 2, 3, column 2, line 25-column 3, line 25. Applicants have reviewed the figures and the referenced text but fail to see any description or suggestion of using tabs of material to attach the EMI/RFI material to the sheet of material.

In rejecting dependent claim 22, the Examiner indicates that Long discloses "tabs of material that are perforated (for example see Figs 1, 2, 3)". Applicants have reviewed FIGS. 1-3 and see no description of tabs, let alone a description of perforated tabs. Applicants ask that the Examiner specifically show or explain how the Long provides perforated tabs. Absent such a showing, dependent claim 22 is allowable.

Claim Rejections under 35 U.S.C. §103(a)

Claim 6 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Forte et al. in view of Isern-Flecha et al. Claim 9 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Forte et al. in view of Gabower et al. Since claims 6 and 9 depend from allowable independent claim 1, dependent claims 6 and 9 are also allowable.

Claims 15-21 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Forte et al. in view of Isern-Flecha et al. and further in view of Gabower et al.

In rejecting claims 15-21, the Examiner stated that the methods of claim 15-21 are "deemed as inherent in the assembly of the claimed EMI/RFI apparatus of the preceding claims as fully met by the accompanying references, (Forte et al., Isern-Flecha et al., Gabower et al).

However, as noted above, Forte et al. fails to describe removing a portion of the material around a periphery of the conductive EMI/RFI shield so as to leave the EMI/RFI shield integrally attached to a remainder of the formable polymer sheet. None of the Figures or description describes removing a portion of material around a periphery of the conductive EMI/RFI shield. Moreover, the Examiner has not shown where Isern-Flecha et al. or Gabower et al. describe or suggest such limitations.

In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent methods necessarily flows from the prior art. See MPEP §2112 and *Ex parte Levy* 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). The Examiner's mere assertions that the methods of claim 15-21 are "inherent" is insufficient to establish a *prima facie* case of obviousness under 35

obviousness under 35 U.S.C. § 103(a). Absent such a *prima facie* showing, Applicants are under no obligation to submit evidence of non-obviousness. MPEP §2142.

Consequently, method claim 15-21 are also allowable.

Added Claims

To more fully claim the novel aspects of the present invention, Applicants have added new claims 23-29. New dependent claim 23 recites that the thermoformable sheet of claim 1 comprises a conductive polymer.

New independent claim 24 recites a sheet comprising a polymer sheet comprising an opening. An EMI/RFI shield is disposed within the opening such that there is a spacing between a periphery of the EMI/RFI shield and the polymer sheet. A plurality of tabs are spaced around at least a portion of the periphery of the EMI/RFI shield to connect the EMI/RFI shield to the polymer sheet. The cited art does not describe or suggest such a sheet. Dependent claims 25-28 should be allowable at least for depending from allowable independent claim 24.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 206-467-9600.

Respectfully submitted,

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